

Amendments to the Claims

Listing of Claims:

Claim 1 (currently amended). Scattered light smoke detector with an optical measuring chamber, comprising:

a sensor arrangement with at least one light source and one light receiver;

a labyrinth system with screens arranged on the periphery of the measuring chamber;

a housing having an elongated shape and a small window opening that is nearer the measuring chamber than a rear part of the housing and,

wherein the at least one light source is arranged in the rear part of the housing, so that between the window opening of the housing and a light-penetrated optical surface of the at least one light source a relatively large gap is formed;

wherein the measuring chamber is delimited upward by a carrier disc from which the housing extends downward, and the labyrinth system forms a lid-like component which can be fixed to the carrier disc and has a floor and a side wall, and which can be plugged onto the carrier disc from below;

wherein a compact, open scattering space is formed in the measuring chamber between a light exit and an entry side of the housing and screens opposite them;

the surfaces, which face each other, of the carrier disc and the floor of the component which forms the labyrinth system have a corrugation.

Claim 2 (previously presented). The smoke detector of Claim 1, wherein the gap is greater than the diameter of the optical surface.

Claim 3 (canceled).

Claim 4 (previously presented). The smoke detector of Claim 1, wherein the window opening of the housing is enclosed by a one-part frame.

Claim 5 (currently amended). The smoke detector of ~~Claim 3~~ claim 1, wherein the housing, apart from the window opening, is open downward, and the floor of the component defines a lid for the housing.

Claim 6 (canceled).

Claim 7 (previously amended). The smoke detector of ~~Claim 6~~ claim 1, wherein the housing has grooves for fixing polarization filters;

Claim 8 (canceled).

Claim 9 (currently amended). The smoke detector of ~~Claim 8~~ claim 1, wherein the screens and the corrugated surfaces of the carrier disc and of the floor of the component have a glossy surface.

Claim 10 (currently amended). The smoke detector of ~~Claim 6~~ claim 1, wherein the screens are arranged on the periphery of the measuring chamber and are

substantially L-shaped, the shorter leg pointing into the measuring chamber, and the gap between adjacent screens is a multiple of their thickness.

Claim 11 (currently amended). The smoke detector of ~~Claim 3~~ claim 1, wherein on the carrier disc, a multiple plug for the electrical connection of the detector to a plug connector which is provided in a detector base is arranged, and that the electrical connection is made by a tangential movement of the multiple plug or plug connector.

Claim 12 (previously presented). The smoke detector of Claim 11, wherein the multiple plug is integrated on the top side of the carrier disc, in so-called insert technology.

Claim 13 (previously presented). The smoke detector of Claim 7, wherein the screens are arranged on the periphery of the measuring chamber and are substantially L-shaped, the shorter leg pointing into the measuring chamber, and the gap between adjacent screens is a multiple of their thickness.

Claim 14 (currently amended). The smoke detector of ~~Claim 8~~ claim 1, wherein the screens are arranged on the periphery of the measuring chamber and are substantially L-shaped, the shorter leg pointing into the measuring chamber, and the gap between adjacent screens is a multiple of their thickness.

Claim 15 (previously presented). The smoke detector of Claim 9, wherein the screens are arranged on the periphery of the measuring chamber and are substantially L-shaped, the shorter leg pointing into the measuring chamber, and the

gap between adjacent screens is a multiple of their thickness.

Claim 16 (previously presented). The smoke detector of Claim 5, wherein on the carrier disc, a multiple plug for the electrical connection of the detector to a plug connector which is provided in a detector base is arranged, and that the electrical connection is made by a tangential movement of the multiple plug or plug connector.

Claim 17 (previously presented). The smoke detector of Claim 7, wherein on the carrier disc, a multiple plug for the electrical connection of the detector to a plug connector which is provided in a detector base is arranged, and that the electrical connection is made by a tangential movement of the multiple plug or plug connector.

Claim 18 (previously presented). The smoke detector of Claim 9, wherein on the carrier disc, a multiple plug for the electrical connection of the detector to a plug connector which is provided in a detector base is arranged, and that the electrical connection is made by a tangential movement of the multiple plug or plug connector.

Claim 19 (previously presented). The smoke detector of Claim 10, wherein on the carrier disc, a multiple plug for the electrical connection of the detector to a plug connector which is provided in a detector base is arranged, and that the electrical connection is made by a tangential movement of the multiple plug or plug connector.

Claim 20 (canceled).

Claim 21 (currently amended). A scattered light smoke detector with an optical measuring chamber, comprising:

a sensor arrangement with at least one light source and one light receiver;

a labyrinth system with screens arranged on the periphery of the measuring chamber;

a plurality of housings, each corresponding to one of the at least one light source and the one light receiver, and having an elongated shape and a small window opening that is nearer the measuring chamber than a rear part of the housing, and

wherein each of the at least one light source and light receiver is arranged in the rear part of the corresponding housing, so that between the window opening of the corresponding housing and a light-penetrated optical surface of the at least one light source or light receiver a gap is formed, the gap is greater than the diameter of the optical surface;

wherein the measuring chamber is delimited upward by a carrier disc from which the housing extends downward, and that the labyrinth system forms a lid-like component which can be fixed to the carrier disc and has a floor and a side wall, and which can be plugged onto the carrier disc from below;

wherein a compact, open scattering space is formed in the measuring chamber between a light exit and an entry side of the housing and screens opposite them;

the surfaces, which face each other, of the carrier disc and the floor of the component which forms the labyrinth system have corrugation.